PATENT COOPERATION TREATY

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From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing (*day/month/year*)	31 AUG 2005
Applicant's or agent's file reference	FOR FURTHER ACTION See paragraph 2 below
MIC-94	

International application No.	International filing date (*day/month/year*)	Priority date (*day/month/year*)
PCT/US04/42712	20 December 2004 (20.12.2004)	

International Patent Classification (IPC) or both national classification and IPC

IPC(7): G01N 27/68; B60C 23/00; H01H 9/50; G01R 1/04 and US Cl.: 324/456,457,452,559, 517, 536, 156; 73/146, 146.5

Applicant

SOCIETE DE TECHNOLOGIE MICHELIN

1. This opinion contains indications relating to the following items:

- ☒ Box No. I — Basis of the opinion
- ☐ Box No. II — Priority
- ☐ Box No. III — Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV — Lack of unity of invention
- ☒ Box No. V — Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI — Certain documents cited
- ☐ Box No. VII — Certain defects in the international application
- ☐ Box No. VIII — Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(*b*) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US04/42712

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

   a. type of material

      ☐ a sequence listing

      ☐ table(s) related to the sequence listing

   b. format of material

      ☐ in written format

      ☐ in computer readable form

   c. time of filing/furnishing

      ☐ contained in international application as filed.

      ☐ filed together with the international application in computer readable form.

      ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US04/42712

Box No. V Reasoned statement under Rule 43 *bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-21	YES
	Claims NONE	NO
Inventive step (IS)	Claims 9-21	YES
	Claims 1-8	NO
Industrial applicability (IA)	Claims 1-21	YES
	Claims NONE	NO

2. Citations and explanations:

Please See Continuation Sheet

Supplemental Box
In case the space in any of the preceding boxes is not sufficient.

V. 2. Citations and Explanations:
Claims 9-21 meets the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest controlling the effective energy impressed on the at least one tire electronics whereby damage to the tire electronics from effects of the high-voltage source is avoided.

Claims 1-8 lacks an inventive step under PCT Article 33(3) as being obvious over Weiss (US 6,600,326 B2) in view of Koch et al. (US 6,444,069 B1).

Re claims 1-8, Weiss discloses tire inspection device (Fig. 1) comprising high-voltage power supply 19, providing a conducting wire 22, coupling one end of conducting wire 22 to the high-voltage supply 19, configuring the other end of conducting wire for contact with the tire 5 (Fig. 6).

Re claims 1-8, Weiss did not explicitly disclose providing a tire containing at least one tire electronics device, and providing a physical barrier in proximity to the at least one electronic device whereby damage to the tire electronics from effects of the high-voltage source is avoided. However, it would have been obvious to provide an electronic device within the tire for monitoring tire pressure, temperature etc. which is well known in the art and a protective barrier for protecting tire electronics device.

Koch et al. discloses providing a tire 70 (Fig. 5) containing at least one electronic device (32) (Fig. 2) for monitoring tire pressure and providing a physical barrier 40 in proximity to the at least one electronic device 32 for protecting device electronics.

At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify Weiss by providing at least one electronic device disclosed by Koch et al. for monitoring tire pressure and providing a physical barrier in proximity to the at least one electronic device disclosed by Koch et al. for protecting device electronics.

Re claim 2, Weiss discloses plurality of wires 22.

Re claims 3-6, 8 Weiss did not explicitly disclose physical barrier comprises covering electronic device with insulative material.

Koch et al. disclose providing physical barrier comprises covering electronic device with insulative material made of rubber (column 1 line 62 to column 2 line 2). Insulative material is broadly interpreted as being made of highly resistive material.

At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify Weiss by providing a physical barrier made of insulative material made of rubber disclosed by Koch et al. for protecting sensor electronics.

Re claim 7, Weiss as modified by Koch et al. did not explicitly disclose providing a physical barrier comprises covering electronic

Supplemental Box
In case the space in any of the preceding boxes is not sufficient.

device with conductive material.

At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify Weiss and Koch et al. combined by providing a physical barrier comprising covering electronic device with conductive material for electromagnetic shielding.

Claims 1-21 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.